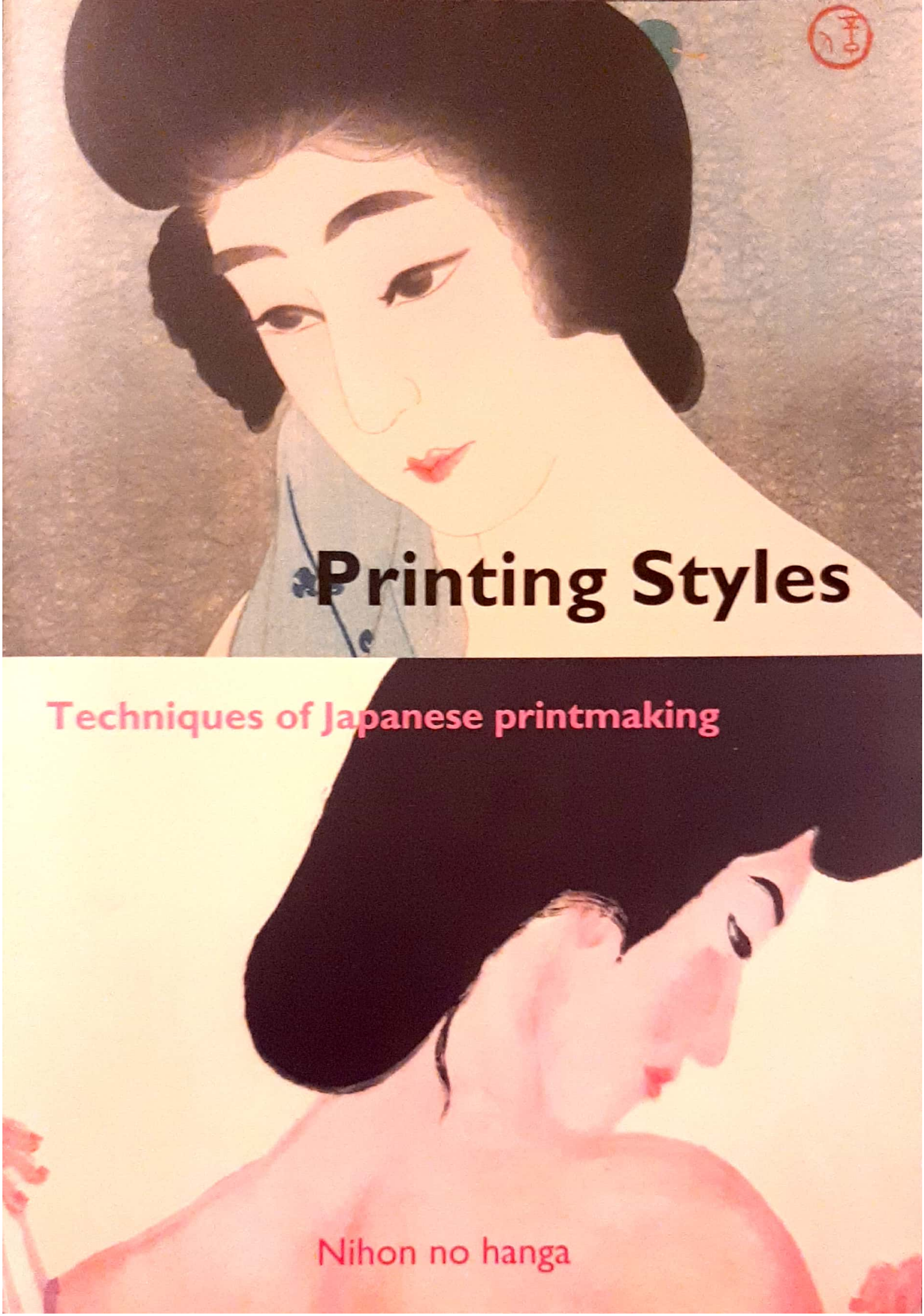

Printing Styles

Techniques of Japanese printmaking

Nihon no hanga

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On the cover

Tonii Kotondo (1900-1976)
Vapor (detail), fig. 18.

Onchi Kōshirō (1891-1955)
After the bath (detail) fig. 29.

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Printing Styles

Techniques of Japanese printmaking

Maureen de Vries

Nihon no hanga

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Printing Styles

Techniques of traditional and 20th century Japanese woodblock printing

Introduction

"The wood-block print shows the artist's true value: his skill as well as his shortcomings, his successes as well as his failures in the work. A line may be bad, but it cannot be concealed in the print as it may be possible to do in the etching. Whatever is cut on the block shows; nothing can be disguised. In this sense it may be said to express the artist most faithfully."

(Yoshida Hiroshi, 1939)

Since 1765 full colour printing with the use of woodblocks developed in Japan. It proved to be an extremely successful and resilient technology because in the period from its inception to World War II, an estimated 1.5 billion impressions were pulled off the blocks.

The traditional system of production involved a publisher, the artist, a block cutter and a printer. It demanded a huge and steady supply of paper, pigments and woodblocks and a developed system of marketing and distribution.

For most of its history, Japanese printmaking was a thoroughly commercial enterprise: the goal was to create prints that one could sell in large quantities. It was a product not designed for the elite, but for a large section of the urban populace of Edo period (1603-1868) Japan. Because of its quality as a mass product it never ceased to attract the attention of the government: prints were always subjected to government approval and certain subjects (especially sexual and political) were expressly forbidden. The presence of censorship curtailed and influenced the content of Japanese prints throughout its history. From the mid-19th century printmaking started to change when the United States forcefully ended Japan's self-imposed isolation from the rest of the world. The rise of rival reproduction technologies such as photography and lithography eroded the dominance of the woodblock based printing technique. By the end of the 19th century woodblock print production had been in serious decline, but after the turn of the century the print world found a new lease of life. Two new movements emerged: *Shin hanga* (New print) and *Sōsaku hanga* (Creative print). The Shin hanga movement was spearheaded by the publisher Watanabe Shōzaburō (1885-1962). He revitalized traditional printmaking by seeking out artists who could create a new style and deliver designs which would be produced following the traditional printmaking method.

Slightly earlier, under the influence of Western artists and practice, other Japanese artists started to renounce the traditional system saying that the involvement of the cutter and printer hindered the transmission of the artist's sentiments onto the printing block: they decided that the entire printing process should be in one hand, that of the artist. In theory these artists did not involve a publisher in the

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production of their prints. However, there is a vast grey area in which *Sōsaku hanga* artists collaborated with publishers, professional block cutters and printers, either to fulfil their creative vision or for commercial purposes.

Traditional woodblock printmaking

In order to fully appreciate Japanese woodblock prints, it is important to understand the traditional process of print production, which was in use until the end of the 19th century and later refined by the artisans working for *Shin hanga* publishers. First and foremost, it should be pointed out that a woodblock print was not the sole product of an artist's endeavour, but rather the result of a cooperation between the artist or print designer, several craftsmen - a copyist, block cutter and printer - and the publisher.

The publisher would commission an artist to design a print or a series of prints, which he felt would be commercially viable – this could be anything from a series of fashionable beautiful women to a rendition of a popular contemporary kabuki play. The artist would then make a rough sketch on paper and show it to the publisher (fig. 1). If the publisher found the artist's drawing satisfactory, it would be further developed by the artist, his studio or even the studio of the publisher. When the finished drawing (*gaka*) was ready, a professional copyist would make a tracing of the preparatory sketch (*hanshita-e*) on transparent paper. The drawing would be pasted face down onto a block of wood, often mountain cherry (*yamazakura*) because of its even and fine grain which made it relatively easy to cut. The wood was also preferred because of its durability. To ensure accurate cutting, the block cutter would rub away most fibres of the paper or the drawing would be impregnated with oil in order to make the paper even more transparent. He would then proceed to cut away everything that was not indicated in black on the drawing, cutting through the paper and into the wood. The resulting block would be the first- or keyblock (*sumi-ita*, literally ink block), which contained a mirror image of the drawing. The block cutter would place two raised notches along the side of the block. In the case of a vertical design a hook-shaped mark was cut in the bottom left hand corner and one on the left side, and with a horizontal design in the lower right corner and along the lower side. These served as registration marks (*kentō*) (fig. 4).

At this point the keyblock would be given to the printer. He would produce a number of proofs, that also show the registrations marks (fig. 2). After black ink had been applied to the keyblock and *kentō*, paper would be laid onto the block and rubbed with a printing disc, or *baren*. Now the first printing in black-and-white from the keyblock was ready. The proofs with *kentō* marks were used to create the colour blocks, generally one for every colour.

Before printing, the paper was prepared with a sizing agent made from animal glue and alum. This was spread with a wide brush (*dosabake*) onto the paper and left to dry. This mixture would prevent smudging and bleeding of pigments during the printing process. The pigments used are always mixed with water and a bit of animal glue to serve as a binder.

The woodblock had to be dampened before the inking to prevent the pigments from staying on the surface. A small amount of rice starch helped the even distribution of the pigment on the block. The paper was placed on the woodblock and the *baren* was used on the back of the paper to rub the pigments into the paper (see fig. 43). This process was repeated until the desired saturation of pigments was reached. The pigment solutions were quite thin, since a heavier mixture would not penetrate the paper very well. For this reason multiple printing sessions of the same or different colours were necessary and by doing so pigments would permeate the fibres of the paper more evenly (figs. 6-7). In that considerable pressure was exerted during the circular movements of the *baren* on the paper, its traces are often seen on the sheet's verso. One colour at a time was printed, but the entire print was ideally finished in one sitting. This meant a large stack

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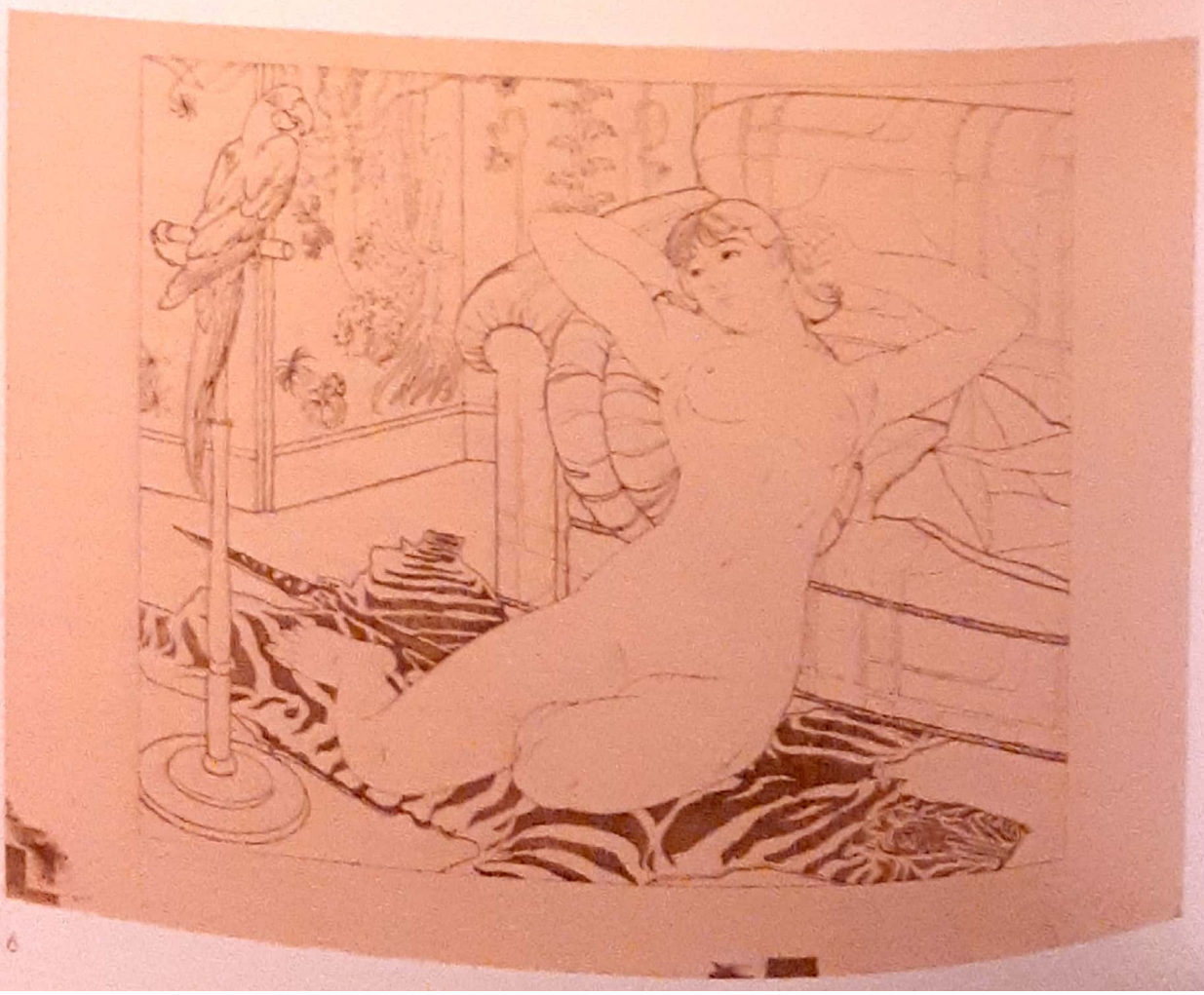

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Figs. 1-3. Ishikawa Toraji (1875-1964)
Study, proof with *kentō* marks and final print for *Blue parrot*, from the series *Ten types of female nudes*
Self published in 1934

This 20th century artist was the publisher of his own prints. His hired block cutters and printers were highly skilled craftsmen and worked with the traditional woodblock printing process. Toraji, however, was completely in charge of the creative process. Toraji based the prints in his famous series *Ten types of female nudes* on sketches he had made of live models (fig. 1), though the interior of the design was a combination of different items he owned and imagined with his mind. Toraji made his initial design in black and white, he only started to choose his colours when the keyblock proof was printed (fig. 2). Proofs of the keyblock for a print can be recognized by the printed registration marks (*kentō*). Usually a publisher would keep proofs of certain prints. In the case of Toraji, he kept some of these himself. His creative process continued after the proof was printed. By hand he would colour in the keyblock impressions, creating different versions of the same setting, for example changing the colour of the carpet and cushions before deciding on the final design (fig. 3).

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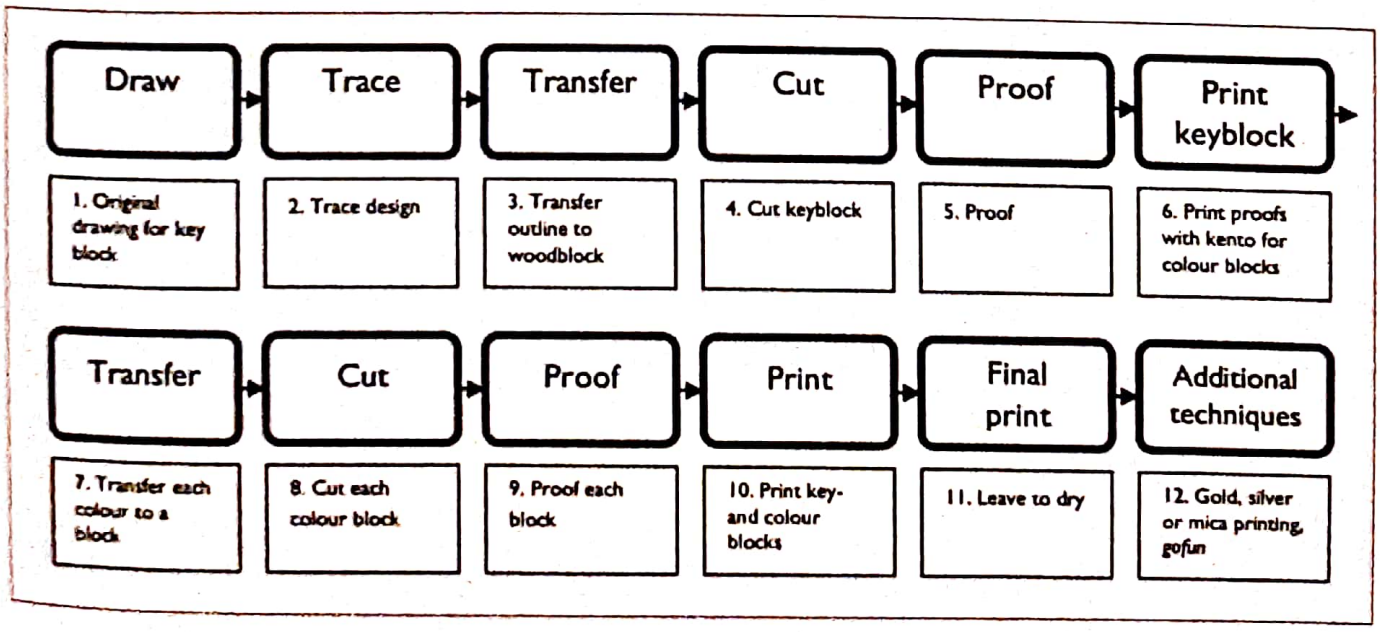
Figs. 4-5. Wada Sanzō (1883-1968)
Keyblock and final print of *Coal vendor*, from the series *Sketches of occupations in the Showa era, second series*
Published by Nishinomiya in 1940

The keyblock of this print contains all the black outlines: from the clothing and hair of the kneeling woman to the cartwheels in the background. The registration marks (*kentō*) can be seen at the lower end of the block, at the right hand side and a little off centre.

of prints was kept by the printer's side. This stack had to be kept moist, so care needed to be taken to keep it damp, especially during warm and dry days. In traditional Japanese printmaking the black outline created by the keyblock was printed first, followed by the lightest colour, building up to the darkest. Once printing of the colour blocks was finished, the prints were left to dry. Special effects such as gold, silver or mica printing for luxurious editions was always done after the print had dried. The paper was repeatedly moistened during the entire printing process, which causes the fibres to expand and shrink. This necessitated the print to receive a final trim before being taken to be sold by the publisher.

Traditional printing method
(Based on Salter, p. 91)



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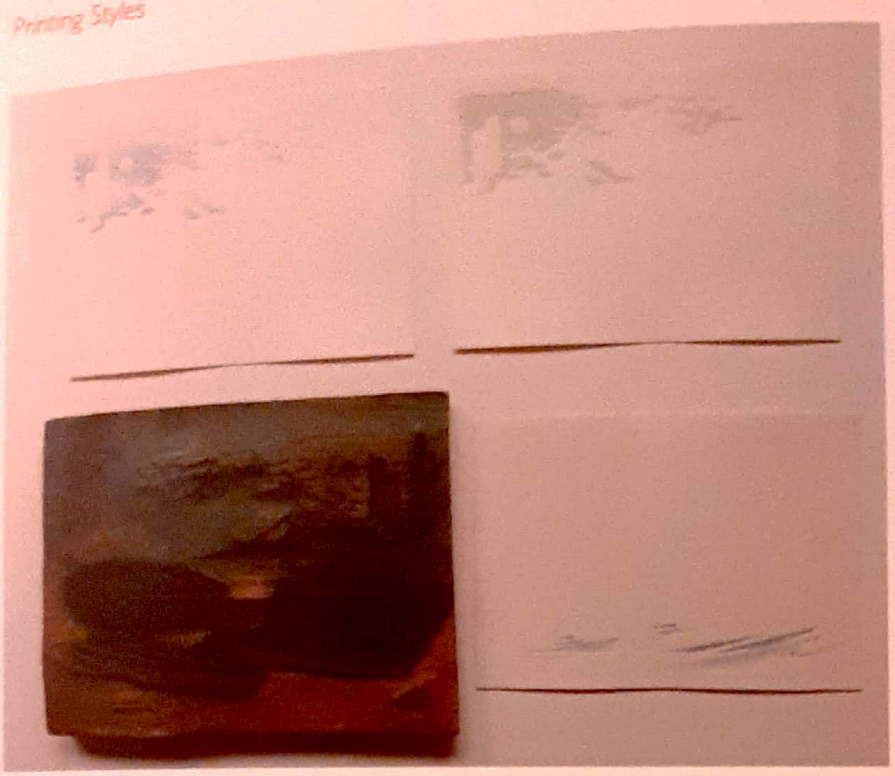
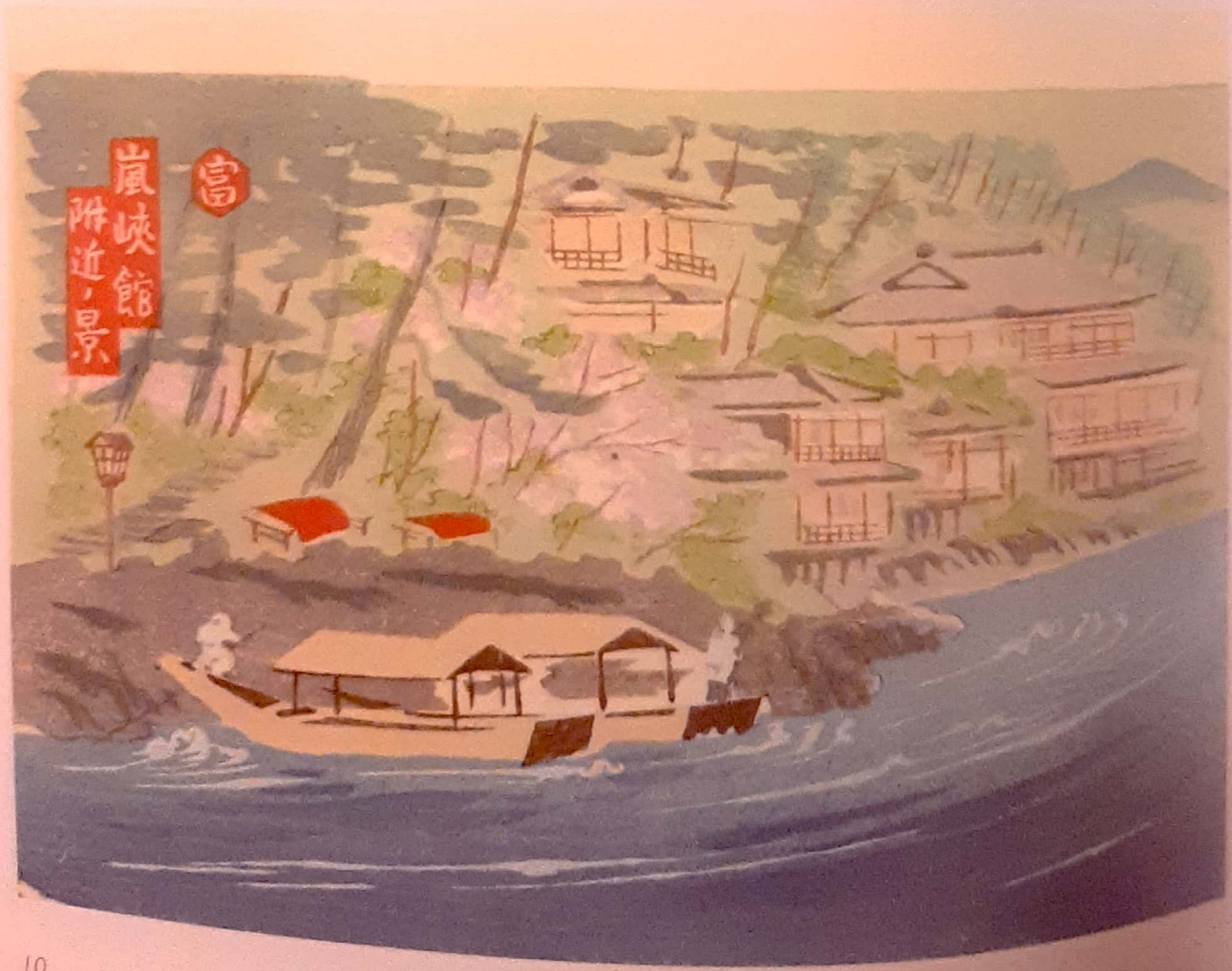


Figs. 6-7. Tokuriki Tomikichirō (1902-2000)
Woodblock with separate colour proofs and the final print of *Rankyōkan*
Published c. 1930

An example of a block that was used for multiple printings of the same area in two different colours, namely blue and green which together make for a deeper green on the final print. The registration marks (*kentō*) are also clearly visible on the woodblock. Note that this design has no black outline and therefore the use of a keyblock was omitted.



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The differences in production of *Shin hanga* and *Sōsaku hanga*

> *"The foundation of all good wood-block printing rests upon the perfection of drawing and painting, of colour and line. These are truly essential, yet it is also true that the artist must see the end from the beginning. The entire course of the development of the print must be charted by him so that his creative genius may be seen not only in the foundation sketch but in the cutting and printing as well. To do otherwise involves a break in that continued development of the print which demands not only a diligent study and analysis of the colour print of the Edo Period, but also the infusion into it of the new creative features significant of the present time. Only in this way can a print be produced which will do full justice to the present creative vision and power of true Japanese artists."*
> (Yoshida Hiroshi, 1939)

The *Shin hanga* movement is characterized by the application of masterful printing techniques. What is achieved by the block cutters and printers is almost unimaginable. The printing process used by these artisans is exactly the same as the traditional production process, but the materials were of higher quality. Good quality wood was selected for the blocks. Thick and luxurious paper came from renowned suppliers. Printers used the best pigments and occasionally prints were embellished with mica. The commercial mindset of the publishers behind the production of *Shin hanga* guaranteed a high standard in printmaking. No costs were spared because they wanted to ignite a renewed appreciation for this almost forgotten traditional art, and made it into a luxury collectable for aficionados at home and abroad. Designs were carefully selected to cater to the desires of the clients, often nostalgic images of beautiful Japan in the form of landscapes or women. As in the traditional world of Japanese prints, artists worked for a publisher and were paid when they delivered a design for a print. Publishers were still very much in charge of what his company would produce, requesting certain types of designs from artists. For example, Kawase Hasui (1883-1957) was Watanabe Shōzaburō's designated landscape designer and Itō Shinsui (1898-1972) delivered images of beautiful women. Even though artists worked with block cutters and printers, discussing matters such as colouring and gradation, they were in fact designers of their prints.

The majority of artists active in the *Sōsaku hanga* tradition were not interested in technical sophistication or commercially appealing prints. The movement's ideals demanded that the style is rough and crude, and very expressive. The goal is not to portray aesthetically pleasing 'quaint and beautiful Japan'. Often the images are printed without contour lines and just using colour blocks, eliminating the traditional use of keyblocks (figs. 8-10). This is where the main difference in printing style emerges. With the absence of the guideline of the keyblock, the artist had to trace his design for each separate colour which all had to bear the distinguishable *kentō* to make sure all parts of the 'puzzle' would line up. This as well as the following step of transferring each section to a block had to be done with the utmost accuracy, since there is no keyblock to cover the connecting parts. Some adventurous artists, such as Onchi Kōshirō (1891-1955), have been known to omit the entire tracing method from their printmaking process, drawing directly onto the block or carving free hand. That being said, actual printing was done in the same fashion as the traditional printing process, the paper had to be kept moist and any embellishments such as mica printing were added after the print had dried (though such special techniques were not often used by *Sōsaku hanga* artists).

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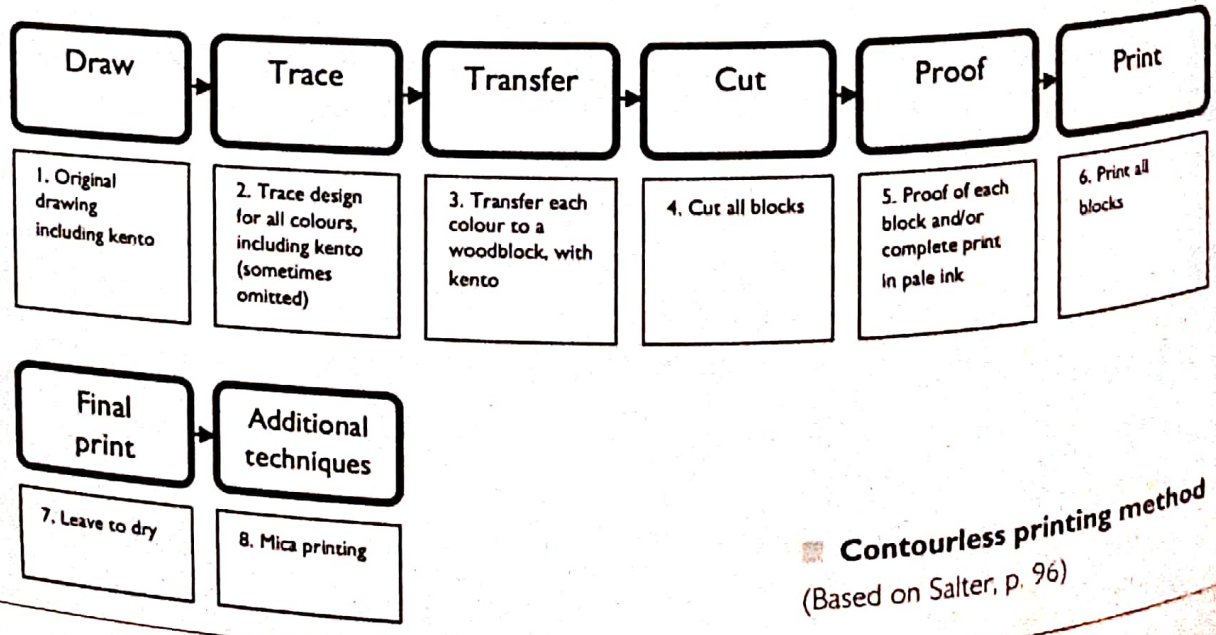
Figs. 8-10. Kawano Kaoru (1916-1965)
Woodblock and final print of *Night rain at Karasaki*
c. 1950

This simple design of owls sitting on a branch in the rain only consist of 4 blocks: a light grey block for the entire background, save for the lights and eyes of the owls which is part of the yellow block that also makes the outline for the print, followed by a second grey block for the upper part of the background and a black block with the the pine trees and owls' bodies. Even though the black block contains most detail, it is not the keyblock of this print and was printed last, over all lighter colours.



Contourless printing method
(Based on Salter, p. 96)

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The trouble with 'editions'

The term 'edition' can be quite confusing. The idea of a limited edition, where a fixed number of prints was created and numbered and no subsequent impressions were made, was something traditional print publishers were not familiar with and 20th century publishers and printmakers also struggled with.

For prints produced in and before the 19th century, the amount was not restricted. If a design proved commercially successful, the publisher would commission his printers to make more impressions. Prints were never numbered and therefore hundreds if not thousands of prints of a single design could have been made. Naturally, woodblocks would show signs of wear as the number of prints grew, resulting in inferior impressions.

In the 20th century, the number of prints of individual designs produced was small compared to earlier practices. On average *Shin hanga* prints could reach a total of 1000, but occasionally in excess of 2000 copies of successful landscapes for example by Kawase Hasui were made. The concept of 'limited edition' was haphazardly applied by both *Shin* and *Sōsaku hanga* artists, though for various reasons.

Figs. 11-12. Torii Kotondo (1900-1976)
Damaged keyblock impression and final print of *Summer kimono with iris pattern*
Published by Ikeda Shoten in 1930

An damaged impression of the keyblock compared to the final print. The keyblock has been made unusable by cutting across the surface of the block and the impression was made to prove that the blocks are no longer in use.

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hanga artists was born out of necessity at a time when no commercial market for their prints existed. The fees collected often only covered the cost of production, since financial gain was not the aim of the *Sōsaku hanga* artist. The operation of subscription systems in the *Sōsaku hanga* movement varies, some were artist-run and others coordinated by publishers. For example, the famous series of *One hundred views of new Tokyo*, entirely produced by *Sōsaku hanga* artists, was released by publisher Nakajima Jūtarō through his special *Sōsaku hanga* Club, in a limited edition of fifty sets (fig 13).

As for individually produced prints, *Sōsaku hanga* artists occasionally numbered their prints by hand. However, different artists used different methods. Hiratsuka Uni'ichi, for example, was known to conjure up random numbers for his editions when pressed by his children to do so: he often did not produce the total number of prints in the 'edition'. Another practice that could have been used is to 'promise' a fixed edition size, but never fulfilling the amount of prints due to lack of interest by buyers (see also fig. 33).

All in all, it is difficult to give exact numbers of prints and editions when it comes down to any type of Japanese woodblock print.

Special techniques

Woodblock prints can have several techniques used to create different effects. Some are done during the cutting of the block and some are realised during the printing process.

Woodblock prints can appear to be watercolours, such as works by Akamatsu Rintaku (1878-1953) (fig. 14). The painterly feel of these type of prints can be achieved by a number of special cutting techniques: brush stroke (*sabitsuke*) and block gradation (*itabokashi*).

To imitate a brush stroke cut (*sabitsuke*) requires a great deal of skill. The line needs to be carved in the same direction of the 'brushed line'. This line needs to be thicker than usual and in order to create the feeling of a brush, the block cutter needed to cut small irregular lines to match the uneven stroke of a brush. To finish the watercolour feel of the print, pale (or watered down) pigments were used (fig. 15).

With *itabokashi* (lit. block gradation) the lines in a block are carved in such a way that the they become soft. This is done by shaving a slope on the block which is polished with horse tail. The block can be used as a regular block and it will create a consistent gradation in all the prints (fig.16).

One other cutting technique that deserves mention is that of *koshime*, or net pattern. This effect is often used to create the illusion of a mosquito net. Cutting an intricate diamond shaped pattern onto a woodblock would be extremely time consuming, so the design is created by cutting two separate blocks containing opposite lines. When both printed, a cross-hatch pattern emerges (see also fig. 16).

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Fig. 15. Kimura Shōhachi (1893-1958)
Cat's bathhouse
Published by Katō Junji c. 1953

All lines in this conical print are cut to appear as brush strokes, imitating a painting.

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Fig. 16. Kobayakawa Kiyoshi (1889-1948)

Dance

Self-published in 1932

This print contains several cutting and printing techniques. First of all, the colour gradation in the kimono was done by block gradation (*itabokshi*), which is visible by the softened edge near the darker parts becoming lighter. Furthermore, a faint cross-hatch design (*koshime*) can be seen in the fabric of the woman's kimono. Both printed gradation (*bokashi*) and scratching of the *baren* as printing effects are used in the background.

Fig. 17. Ishikawa Toraji (1875-1964)

Mount Fuji in spring from Miho

Self published in 1934

Colour gradation (*bokashi*) was extensively used for this print. There is a gradual blue transition in the sky and darker blue in the water. The differences in the green grass is achieved by separate impressions with slight colour variations (see also figs 6-7).

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Figs. 18-20. Torii Kotondo (1900-1976)
Three impressions of Vapor Published by Sakai and Kawaguchi in 1929

These three impressions of the same edition illustrate how subtle the colour differences can be between designs of the same print run. The grey to blue gradation in the background show that the pigments were most definitely applied by hand and as evenly as possible distributed. One other very faint difference can be seen in the amount of black pigments that fade out in the hairline.

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As for printing effects, a number were used in 20th century printmaking. Printed colour gradition, or *bokashi* is probably the most pronounced. It is achieved by brushing the pigment onto the block and parts are wiped away to create areas with a lesser amount (fig. 17). This type of wiped *bokashi* can be applied in various ways, as a straight or wavy line, across the entire print or even combining multiple colours. Since this is done by hand, slight differences can be noticed between prints of the same design (figs. 18-20).

Another printing effect is used to create a deep colour in a print, for example for a dense colour of a kimono or background. To achieve this, multiple print runs are necessary. This flat colour (or *betazuri*), requires a precise amount of pigment, water and paste. (fig. 21).

Two other commons special techniques that fall under printing effects are blind printing (*karazuri*) and scratching of the printing disc, also known as *baren sujizuri*. Both these techniques were employed by *Shin hanga* printers and *Sōsaku hanga* printmakers.

For blind printing, or embossing (*karazuri*) a separate block is needed, no pigment is used but the paper still needed to be damp. The raised lines on the woodblock will make an indentation in the paper, when enough pressure is applied during printing. This embossed area can either remain blank or successive impressions with colour blocks can add pigments. In some cases, the keyblock, or parts of it, was used for creating this effect (fig. 22). Publisher Watanabe Shōzaburō urged his artists to experiment with their prints by adding texture. Some designs of naked women show a blind printed outline, with pink pigments added to create a softer silhouette (see fig. 23). This experimenting also resulted in a technique where the baren is used on its side and pressure is applied while making a circular motion. This leaves marks on the surface of the print, known as *baren sujizuri*, or circular scratching, often employed to suggest steam or smoke (fig. 23). In traditional Japanese printmaking visible baren markings were considered a defect, it meant too much pressure had been used by an inexperienced printer. Printers had to take great care to make sure the scratchings were not visible. Usually a baren with a thicker cord is used and can be rubbed with the grain, across or in a circular motion. If the paper is too wet, it can peel due to the amount of pressure.

One last printing technique was mostly used by *Sōsaku hanga* artists: sesame printing (*gomazuri*). In traditional woodblock printing this was not even considered a technique: it meant the printer was not skilled enough to create the desired flat colour. The name comes from its appearance, it seems as if sesame seeds have been pressed onto the block, making a haphazard coverage with ink. In this technique little to almost no paste is used, so the pigment particles float in the water and onto the paper. Pressing firmer onto the paper creates a finer texture then when pressed lightly. *Gomazuri* often gives *Sōsaku hanga* its rough feel (fig. 24).

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Fig. 21. Yamakawa Shūhō (1898-1944)
Autumn, from the series *Four images of women*
Published by Bijutsusha in 1927

A good example of a print mostly done in flat colour (*betazuri*), with the exception of the hearts and clubs on the underkimono and hair which have some colour gradation. Flat colour is one of the characteristics of traditional Japanese woodblock prints, where shadows were rarely defined.

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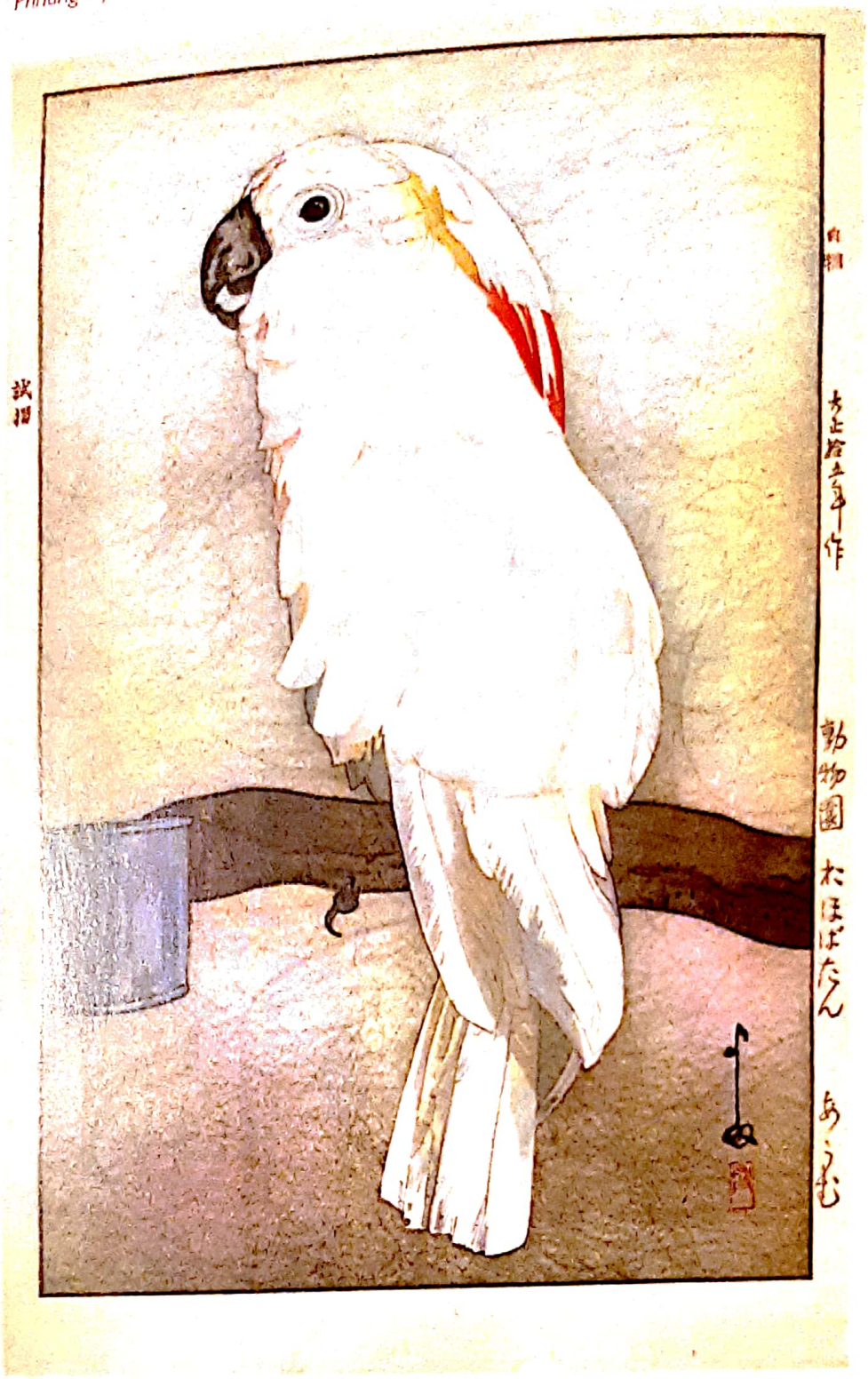

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Fig. 23. Itō Shinsui (1898-1972)
Early summer bath, from the series *Twelve forms of new beauties*
Published by Watanabe Shōzaburō in 1922

To create the illusion of steam from a bath, scratching of the *baren* (*baren sujizuri*) has been applied all over the print. The keyblock of this print was used for a number of blind printed impressions, to create a softer outline. For one or two impressions some pink pigments were added to enhance this effect.

Fig. 22. Yoshida Hiroshi (1876-1950)
Salmon-crested cockatoo
Privately published in 1926

The number of blocks used in this print was 8, but it required 22 impressions. Part of the keyblock was kept clean for blind printing of the feathers and *baren* scratching was used in the background. Yoshida himself remarks:

"By the rough effect on the background achieved by using baren sujizuri, *the fluffy, feathery effect of the plumage is emphasized. Of course, in painting the aim is achieved by means of contrast, and in prints* baren sujizuri *can be used to advantage to get same effect as in the above-mentioned examples."* (Yoshida Hiroshi, 1939)

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Fig. 24. Koizumi Kishio (1893-1945)

White dusk at a lake in the mountains, ice-fishing for *wakasagi* fish, from the series *Thirty-six views of the sacred peak of mount Fuji*

Self published in 1941

Kishio often used the sesame printing (*gomazuri*) technique in his prints. Colour does not appear smooth, as if the pigments are floating on the paper. For this particular scene it creates the grainy and grim atmosphere experienced during dusk.

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Variants

Of many designs in Japanese 20th century printmaking, variants exist. There can be multiple reasons for this but three possibilities stand out. The first is the intentional change to a composition or to the colour palette. It was most likely that the publisher might wish the experiment with different background colours or the addition of an element in the composition. It is known that Watanabe Shōzaburō changed the moment of the day in Hasui's landscapes from sunrise to sunset by altering the colour scheme. (figs. 25-26). Others might add a moon, enhancing the evening atmosphere or experiment with kimono colours suggesting a shift in season (figs. 27-28). It is quite possible that these adaptations were made without consultation of the artist.

The second source of variation is found specifically in the world of *Sōsaku hanga* and was the result of a change in the person who executed the printing. For example Onchi was known to have initially printed his own works but later allowed or requested his pupil Sekino Jun'ichirō (1914-1988) to make more printings from the same blocks. Onchi'sprintings were executed rather sloppily, whereas Sekino's printing was precise and neat (figs. 29-31).

Figs. 25-26. Kawase Hasui (1883-1957)
Hachinohe-same on a clear day and during sudden rain, both from the series *Collection of scenic views of Japan, eastern Japan edition*
Published by Watanabe Shōzaburō in 1933

Two variants of the same design. The rainy version is printed from the exact same blocks, but with one additional block for grey pigments. This extra printing also adds to the sombre atmosphere of the print, the grey darkens the existing shadows.

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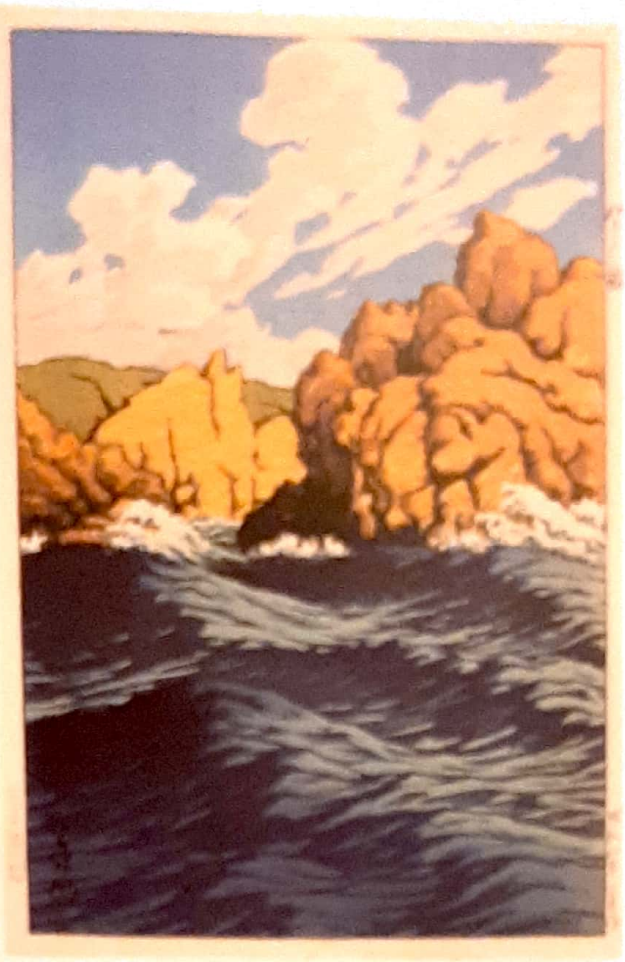

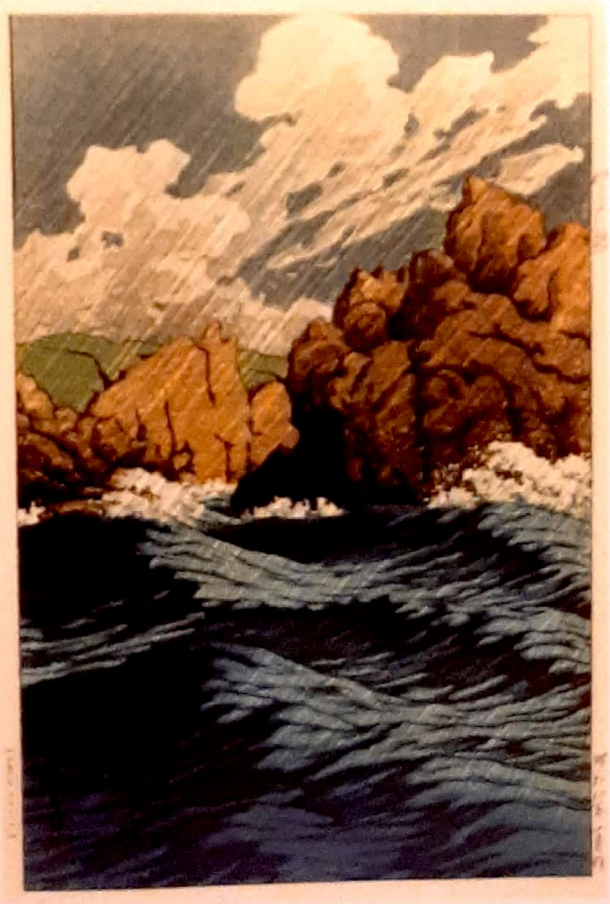

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Figs. 27-28. Torii Kotondo (1900-1976)

Two different versions of *Sash*
Published by Kawaguchi in 1929

Many publishers changed designs to create different variations and there is a third version of this print known. Blocks had to be cut for all different versions. Both prints have a mica layer which is printed over a coloured background.

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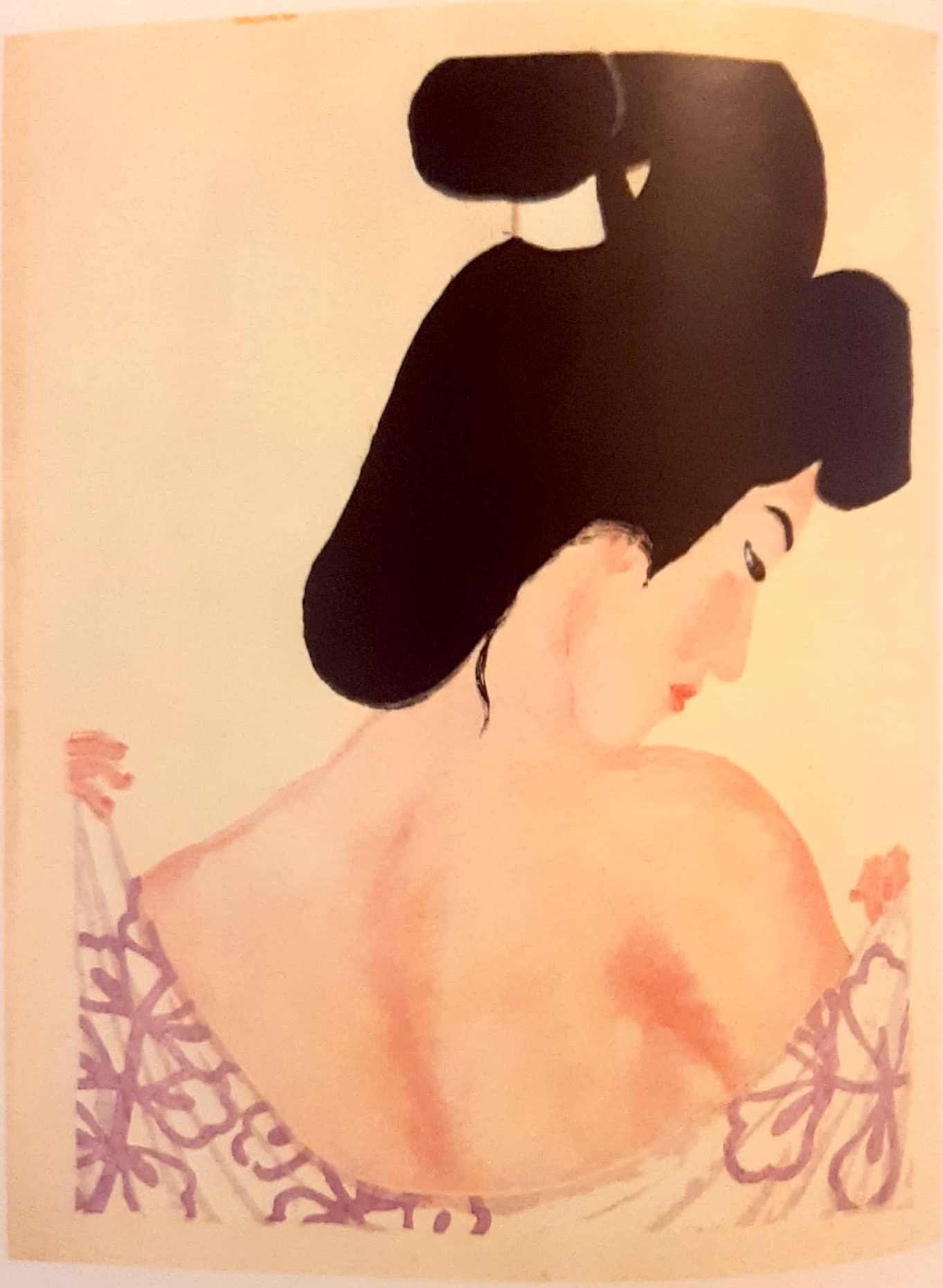

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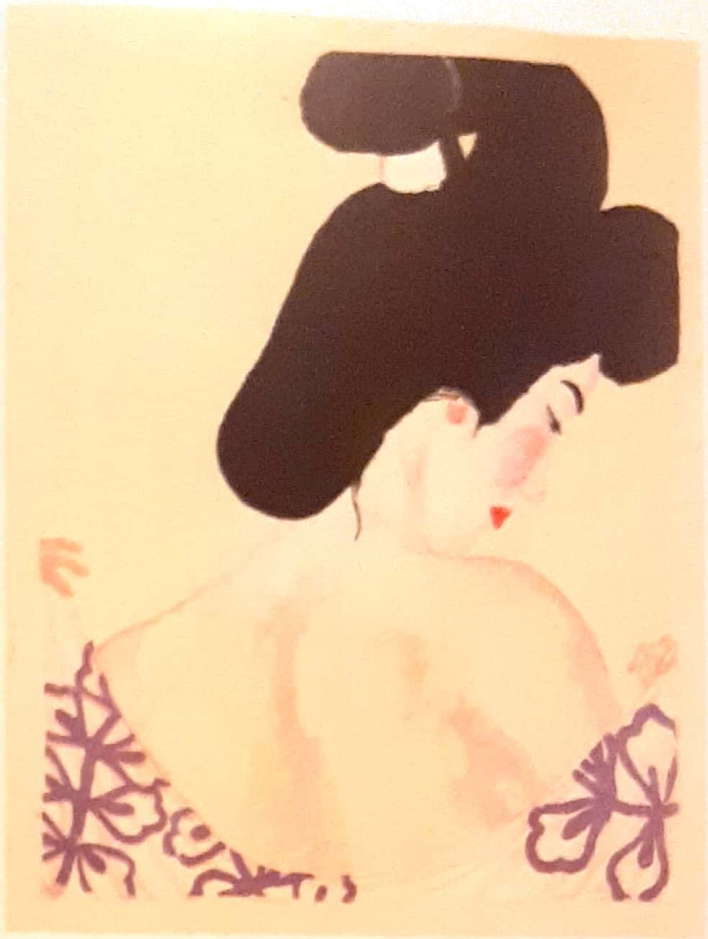
Figs. 29-31. Onchi Kōshirō (1891-1955)
Three impressions of After the bath, from the series Eight figures of contemporary women
Privately published in 1934, 1948 and 1993

The original design was printed by Onchi himself. When inspected closely, little irregularities of his messy hand can be seen in how he printed the fingers. The second impression dates from after 1948, when Onchi's work became quite popular with American clientele. Sekino Jun'ichirō, his pupil, was charged with pulling a number of prints off the original blocks. His work appears much more precise and for example the hair in this print has been reprinted a mulitple times to create a deeper colour with a sheen to it. The third and last impression was printed by the artist's son, Onchi Kunio, as late as 1993 and in an edition in 20. Kunio also printed from the original blocks. If blocks of good quality wood are taken care of, it is possible to re-use them many years later. Wear of the blocks with low editions made from them throughout the years would not be a problem. However, warpage due to excessive exposure to moisture or heat will damage a woodblock beyond repair.



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Finally in both *Shin hanga* and *Sōsaku hanga* variation might occur when additional printings from the original blocks were made after a significant time interval. Damage due to wear or shrinkage to the colour blocks may have caused the printers to have to use newly cut blocks, or reduce the colour scheme.

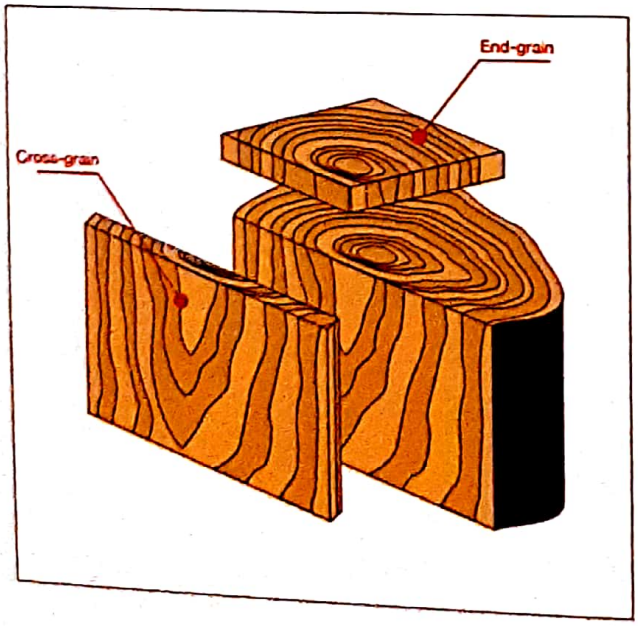
Wood

In traditional Japanese woodblock printing mountain cherry (*yamazakura*) was considered the best option. It is a sturdy hardwood that does not splinter and has a soft grain which makes it easy to cut for fine lines.

The wood used for woodblocks is cut along the wood grain, unlike blocks used in western wood engraving where the wood is cut across the end grain (fig. 32). The keyblocks are carved from the hardest part of the wood and the colour blocks from the softer parts. Ideally all blocks for the same print come from the same tree.

Though mountain cherry was the wood of choice, boxwood (*tsuge*) was often inserted when very fine lines needed to be cut, such as strands of hair. Zelkova (*keyaki*) was used when a woodgrain effect needed to be used in the design of the print.

Fig. 32. Wood used in Japanese woodblock printing is cut cross-grain. *



Considering *Shin hanga* publishers adhered to the traditional printmaking process, their block cutters exclusively worked with mountain cherry blocks. It is known publisher Watanabe had a large stockpile of woodblocks. All the same size, not having to buy different sizes of blocks and paper reduces costs.

However, 20th century *Sōsaku hanga* artists did not solely use mountain cherry. One reason being they did not restrict themselves to one format. Increase in print size also means increase in woodblock size and decrease in edition size means there was no need for a woodblock that could withstand thousands of impressions, which means cheaper alternatives could be explored. For example using plywood, consisting of thin layers of wood glued together, makes it possible to create larger prints (fig. 33). However, the artist had to investigate first if the surface and deeper layers could be carved without damaging his tools. Other options were tried and tested by *Sōsaku hanga* artists such as lino, litho or a combination of the two with or without woodblock. Where in traditional woodblock printing the type of wood was of the utmost importance, in the world of the *Sōsaku hanga* maker it was a tool to exercise their creativity, to experiment and play with.

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Fig. 33. Sekino Jun'ichirō (1914-1988)
Village by the sea
Self published in 1942
Edition 6/30

A prime example of a large work by a *Sōsaku hanga* artist. Even though the print has been marked as number six out of an edition of thirty, it does not mean the edition was finished. A very large design, measuring 57,3 by 76,8 centimeters. The sky has a traditional style straight line *bokashi*, often seen in the design by Utagawa Hiroshige.

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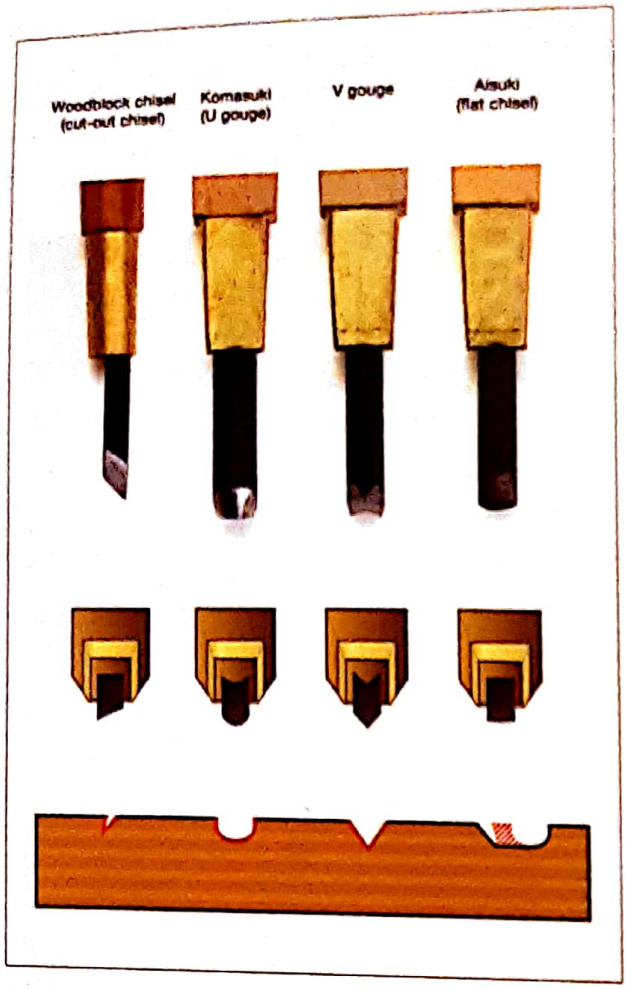

34. Four types of knives.
From left to right: *hangitō*, *komasuki*, *sankankutō* and *aisuki* *

Cutting tools

The knives, gouges and chisels used in the cutting of the woodblock are similar to the tools of a carpenter and sculptor. There are many different types and sizes when it comes to tools used by block cutters and printmakers, but there are generally three types of knives used: the knife (*hangitō*), line marking gouge (*keibiki*) and chisels (*aisuki*) (fig. 34).

The *hangitō* is the first tool used, to cut away the sides of the lines to prevent them from being damaged when the area around those lines is removed. This is the only knife that is drawn towards the block cutter, all the other tools are used away from the body. The *keibiki* is used for the difficult

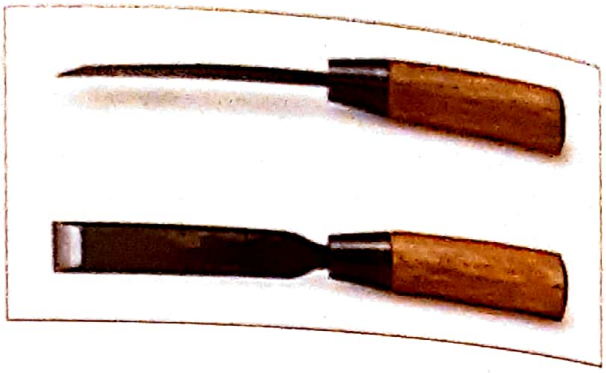

Fig. 35. Two types of kentō chisels (*kentō nomi*). *

parts, it was basically the mirrored version of the *hangitō*. It was used where the *hangitō* was impractical. A round gouge (*komasuki*) was used to clear the area around the outline created by the *hangitō*. A flat bladed chisel, or *aisuki*, was used to clear smaller areas or clean up larger areas cut away by its larger cousin, the clearing chisel (known as *nomi*) (fig. 35). A *nomi* has a metal ring at the base, so it can be used with a mallet.

A v-shaped gouge, or the *sankakutō*, is the only tool which was not used in the traditional woodblock printing process. It was imported from the west and is used to create a v-shaped with a fixed angle. Traditionally such a cut would have to be made by two adjoining lines cut by a *hangitō*.

Brushes

Although it is sometimes difficult to believe, everything one sees on a Japanese woodblock print is printed and a painting brush is never used. However, the woodblock printing process calls for an array of brushes, used in various stages. First of all, a brush was used to remove chips and shavings from the block. A wide soft brush (*dōsabake* or *mizubake*) was employed to wet the paper before printing. For pigments a number of brushes were utilised, one to mix and transfer pigments to woodblock and another to spread them out onto the block. The

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Figs. 36-37. *Hakobi* or *tokibō*, a transfer brush and how to use the brush to apply pigments. *

small *hakobi* or *tokibō brush*, was kept in a bowl with pigments mixed with water and transfers the pigment to the woodblock (figs. 36-37). The *surikomi bake*, with a square-shaped head and long bamboo handle traditionally applied pigment directly onto paper or was used for inking smaller parts by hand. A larger version of this brush was also used for inking the woodblock, but by the end of the 19th century a new type of western brush was adapted to be used

Fig. 38. Left: Three different sized *marubake*. Right: Three *surikomi bake*. *

in printing. When looking at the round cornered brush (*maru bake*) it is easy to see on what type of brush it was based: a shoe brush (fig. 38).

Baren

The *baren* is a round disc which is used to press the paper onto the woodblock to maximize absorption of the pigments. It consists of three key pieces: a core (*shin*), support pad (*ategawa*) and is covered in a sheath of the bamboo plant (*takenokawa*) (figs. 39-40). The core is made out of a long piece of twisted fibre, shaped into a coil. The support pad is made from approximately 40 layers of old paper laminated together. Both discs are covered in one sheath of bamboo: it takes extreme precision to fold this neatly over the core. When the *baren* is not used it is set upon a cloth with camellia oil, to prevent the bamboo from splitting.

Though the traditional bamboo *baren* with inner coil was used by many printers and printmakers, in the *Sōsaku hanga* scene other objects were used to apply pressure, such as wooden spoons. *Baren* made out of ceramic, plastic (fig. 41) or with rotating metal

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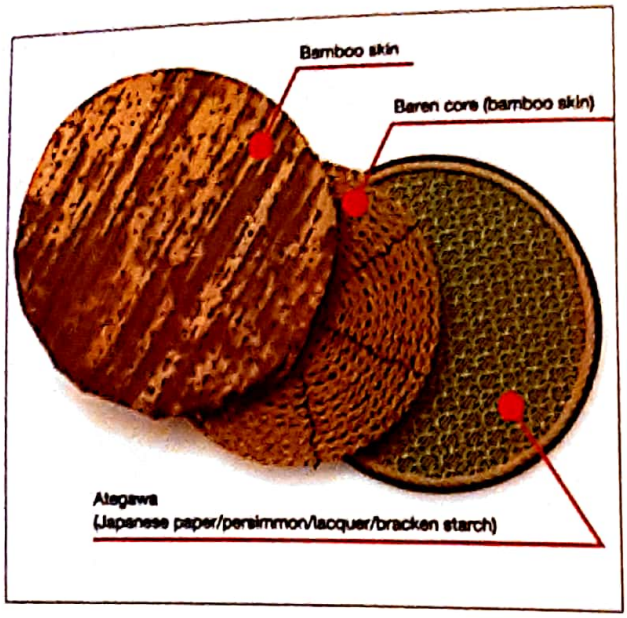

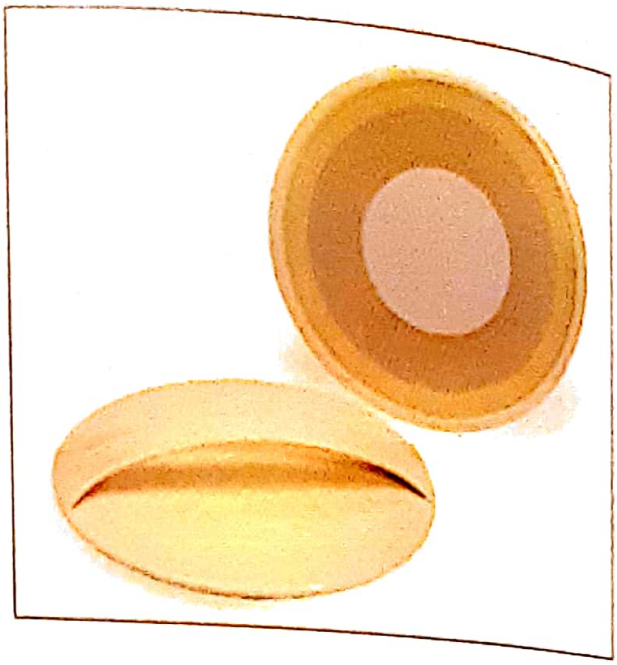

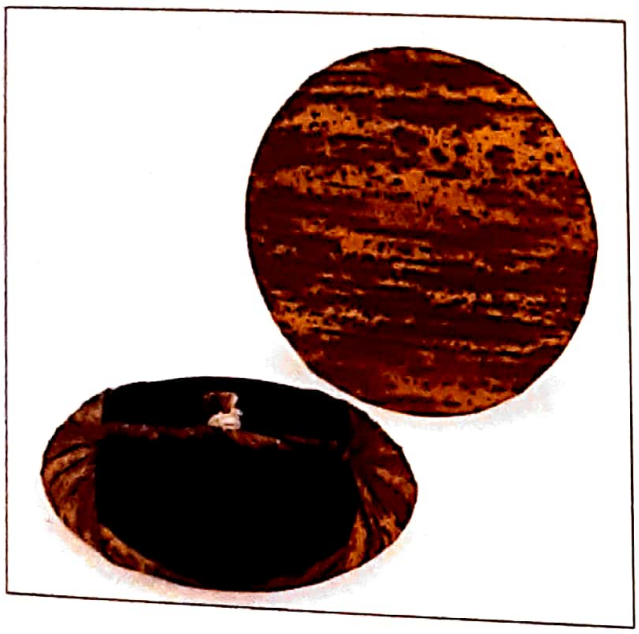

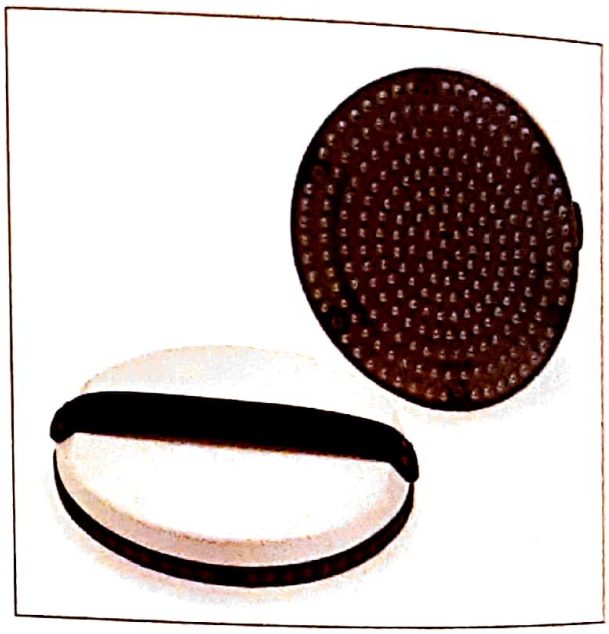

Figs. 39-40. Traditional bamboo *baren*. *

Figs. 41-42. Plastic disk *baren* and metal ball *baren*. *

balls (fig. 42) are newer variations of the tool.

The *baren* is held by four fingers, pressure is exerted from the shoulder to the heel of the hand (fig. 43). The *baren* works into the *kagi kentō* mark on the right-band side of the block towards the left and then either in a zig-zag motion (*kimekomibaren*) for flat areas of colour or a circular motion (*mawashibaren*) for smaller areas and fine lines.

Paper

Traditional Japanese prints were commonly printed on *kōzo* (mulberry paper), extracted from the white inner bark of the plant. This type of paper is still made today. The fibres have to be boiled and bleached before it can sit in cold water when all the impurities have to be picked out by hand. Once this process has been repeated until all impurities are gone, the fibres are beaten and finally added to a vat

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Fig. 43. How to hold a *baren*. *

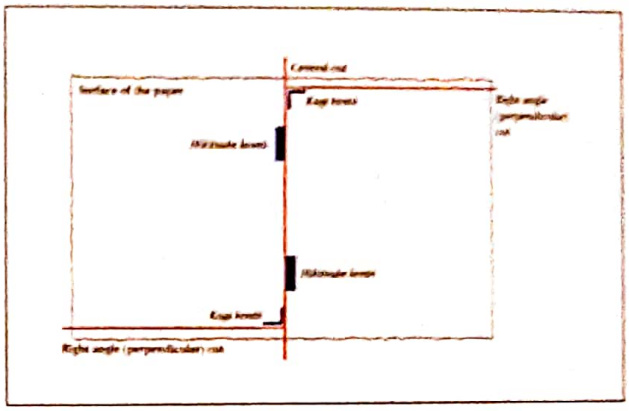
with water and a thickening agent (*neri*). The sheets are formed by scooping the liquid into a deckle (a wooden frame covered in a bamboo gauze) and before the liquid is released back into the vat, the fibres are beaten again. For a thicker paper, more liquid is scooped on top of the existing layer of fibres. Once the desired thickness is achieved, the bamboo gauze with the paper is taken out of the deckle and the paper is laid on top of the other drying sheets. The bamboo gauze is peeled off and the thickening agent prevents the stacked sheets from becoming one massive block of paper. Weights are put on top of the pile to press out more moisture. Further separate drying of the sheets is preferably done by sunlight, but often hot steel sheets were used to speed up the process.

Shin hanga are generally printed on thick, good quality paper. The long fibres in the paper expand when the paper is dampened so it can withstand multiple printings and absorb pigments easily.

Publisher Watanabe always bought large sheets in bulk. And even though he bought the paper from one particular paper maker, the Iwano family from Echizen in Fukui Prefecture, the quality of the paper differs slightly every year. He would buy up to five

Fig. 44. Illustration of the placement of the *kentō* (registration marks) and the cutting of the paper. **

The full sheet of paper (double *ōban* size) would be delivered to Watanabe. Before printing, the paper would be cut (along the red lines) into two *ōban*-sized sheets with two straight and two uneven edges.



hundred sheets of double *ōban* size (77 x 50 cm), which was never in stock for more than six years. The large sheet would be cut in half and slightly trimmed on one side, this creates the distinctive sides of a *Shin hanga* print: two rough and two neatly cut sides. The paper was cut this way for accurate placement of the woodblock, the *kentō*, or registration marks, would line up on the straight edge and side of the paper (fig. 44).

In the process of making a woodblock print, a *Sōsaku hanga* artist used many different varieties of paper. High quality paper can be costly and an artist might therefore use a cheaper variety before printing it on the final piece of paper. Sometimes very thin paper was used or even coloured sheets, for example by artists such as Tanaka Kyōkichi (1892-1915) and Sekino Jun'ichirō. (fig. 45).

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Fig. 45. Tanaka Kyōkichi (1892-1915)

Something hidden, from the portfolio *Public publication: 'Reflections of the moon' II*

Published by Rakuyōdō in 1914

This design is printed on very thin, almost transparent green paper.

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Fig. 46. Kitano Tsunetomi (1880-1947)

The heroine Umekawa in "Meido no Hikyaku" [by Chikamatsu Monzaemon], from the series *The complete works of Chikamatsu*

Publsihed by Seikadō in 1923

The snowflakes in this print were applied by the use of a stencil. As such, every impression of this design has identical snowflakes applied by a stencil brush (*surikomi bake*).

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Fig. 47. Hashiguchi Goyō (1881-1921)
Woman combing her hair
Privately published in 1920

These two individuals in figures 47 and 48 are surrounded by a mica background. Goyō chose to apply mica on an unprinted surface, creating a sof shimmer. When mica is glued onto a coloured background, such as the dark grey in Kōka's design, the mineral takes on a different effect, resulting in an almost silver-like appearance.

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Fig. 48. Yamamura Kōka (Toyonari) (1886-1942)
Nakamura Ganjirō I as Akane Hanshichi, from the series Flowers of the theatrical world
Published by Yamamura Kōka Hanga Kankōkai/ Watanabe Shōzaburō in 1920

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Printing Styles

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Pigments

Powdered pigments (*ganryō*) are traditionally used in Japanese woodblock printmaking and are either mineral or vegetable based. In the Edo-period only four basic colours with an natural base were used: black (*sumi*), yellow, blue and red. Over time different types of synthesized pigments were imported from the West, first Prussian blue (*berō-ai*) in the 1820s and later ecoline and aniline from circa 1865. In traditional woodblock printing, the printer mixed the colours to obtain the right shade, in the 20th century it is more common to use readymade colours. However, the use of *ganryō* had not completely vanished since it was a lot cheaper to use when the artist needed larger quantities. By mixing the powders, other colours can be made. Pigments were mixed with a bit of water (see also fig. 37). An important addition for the pigment is the paste (*nori*), which is always mixed on the woodblock with the powdered pigments. This paste is usually made from rice starch or wheat flour and water. Its texture combined with the pigments makes for an even and matt colour and helps with holding the paper in place during printing.

Another traditional pigment that was still used in the 20th century is known as *gofun*. Made from ground oyster or clam shells mixed with paste, *gofun* is usually applied after printing directly on the print (sometimes with use of a stencil), or spashed with a brush for a dramatic snow effect (fig. 46).

Shimmering backgrounds in prints was achieved with the use of mica powder. Since it was cheaper than silver powder and did not discolour, it was often printed over a coloured background such as grey to create the illusion of silver (figs. 47-48). Mica printing (*kirazuri*) was done after the entire print was finished. A stencil could have been used to protect the image which would not be covered in mica. The area would then be brushed lightly with glue and dusted with mica powder with the excess shaken off. The print would be brushed once more after it was completely dry. If the mica was mixed with pigments or glue, it would lose its shimmer.

In the *Sōsaku hanga* tradition artists have their own ideas about the use of pigment in their art. For example, Kawanishi Hide is known to only use pigments as he had bought them. In his earlier works he only used primary colours (fig. 49), and as more readymade colours become available, he uses those too (such as turquoise) (fig. 50). Whereas Onchi, the leader of the *Sōsaku hanga* movement, insisted on experimenting freely with all sorts of pigments: he even applied oil-based paint to his blocks. Oil-based pigments were traditionally not used because when printed it lies on top of the paper. Oil paint also does not dry and the blocks which have been inked with oil-based pigments cannot be re-used with water-based pigments.

"The colour of Japanese prints improves with time. The print gets better and better as the days pass by. This is unlike other pictorial art which is at its best at the moment when the picture is finished. When the print is finished, while the paper is still wet, the print looks good. But when the paper dries, the general effect of the print is often disappointing to the artist. However, the colour improves in a few days or in the course of a few months; this is extremely reassuring to the artist. The improvement is not due to any change which may occur in the colour of the paper, or to the fading of certain colours in the print."
(Yoshida Hiroshi, 1939)

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Fig. 49. Kawanishi Hide (1894-1965)
Chianni Circus, from the portfolio *Woodblock prints by Kawanishi Hide*
Published by Hanga no Ie in 1925

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Fig. 50. Kawanishi Hide (1894-1965)
Ins season at the Katsura Imperial villa
Self-published in 1955

This booklet is based on the following sources

Japanese Woodblock Printing by Rebecca Salter (A&C Black, 2001)

'Materials and Techniques' by Shiho Sasaki in *The Hotei Encyclopedia of Japanese Woodblock Prints* Part I, pp. 325-350 (Hotei Publishing, 2005)

Japanese Woodblock Printing by Hiroshi Yoshida (Sanseido Company Ltd, 1939)

'Toraji's "Reading" Print: A Case Study' by Darrell C. Karl (2015)

* Images courtesy of the MAU Art & Design Glossary by Musashino Art University

** Image from Kawase Hasui, special issue of *Ukiyo-e geijutsu*, no. 153 (2007): 109.

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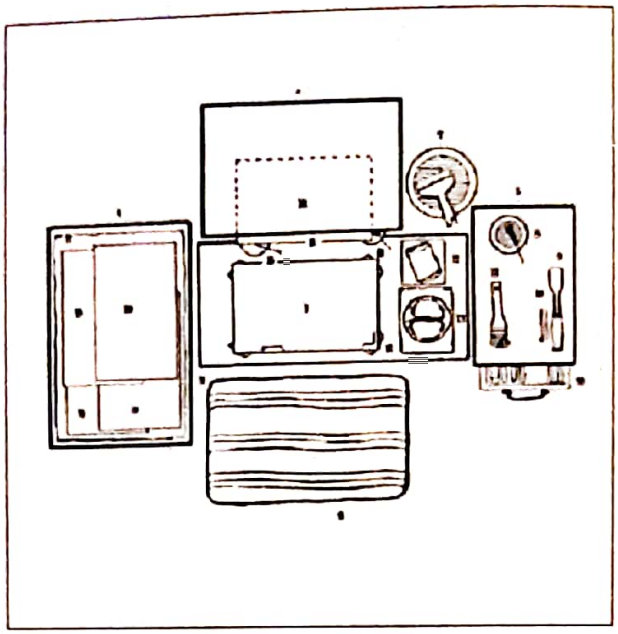

Diagram showing the position of the artist when printing, his implements and the materials used.

1. Wood-block. 2. *Mae-bako* (front box) 3. *Suri-dai* (printing stand). 4. *Mekuri-dai*, for placing the printed sheets on. 5. *Yoko bako*, or side box with a drawer. 6. *Zabuton*, or cushion upon which the artist sits. 7. Basin with water and brush. 8. Bowl with pigment and *tokibo*. 9. *Kentō-nomi*, or chisel used when changing the register marks. 10. *Kuiki*, or pieces of wood used when changing the register marks. 11. Brush for spreading pigment on the block. 12. *Zokin* (wet cloth) on a tile. 13. *Baren* on a slightly oiled piece of cotton. 14. Oil container. 15. Jar of paste. 16. Wet-rag cushion. 17. Bottom sheet of paper. 18. Printing sheets on the shelf inside the box. 19. Printed sheets "crawled". 20. Drawer with necessary tools.

From: *Japanese Woodblock Printing* by Hiroshi Yoshida (Sanseido Company Ltd, 1939)

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Curator	Chris Uhlenbeck
Junior Curator	Maureen de Vries
Catalogue design	Robert Schaap

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On the back cover

Kimura Shōhachi (1893-1958)
Cat's bathhouse, fig. 15.

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